

AUG 4 1923

SIGMA XI QUARTERLY

Vol. XI

SEPTEMBER, 1923

No. 3



CONTENTS

| | |
|--|----|
| EDITORIALS: The Twenty-fourth Convention..... | 43 |
| The Sigma XI Fellowship..... | 44 |
| Award of the Sigma XI Fellowship..... | 45 |
| Installation of the Oregon Chapter..... | 52 |
| Chapter Reports: North Dakota, Ames, Michigan..... | 54 |

OFFICERS OF SIGMA XI

President.....HENRY B. WARD
University of Illinois, Urbana, Ill.
Secretary.....EDWARD ELLERY
Union College, Schenectady, N. Y.
Treasurer.....GEORGE B. PEGRAM

TIGHT BOU

Union College, Schenectady, N. Y.

Entered as Second-class Matter, June 8, 1923, at the Post Office at Easton, Pa., under the Act of August 24, 1912. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized June 8, 1923.

SIGMA XI QUARTERLY

EDITORIAL COMMITTEE

FLOYD KARKER RICHTMYER
EDWIN EMERY SLOSSON

HENRY BALDWIN WARD
EDWARD ELLERY

Vol. VI

September, 1909

HTLY

UND

every one in attendance on the general meetings. Dr. Whitney is too well known in this country and Europe as an investigator to need an introduction to any scientific audience. He has accomplished great things himself and has inspired many workers not only in

OFFICERS OF SIGMA XI

| | |
|----------------|--|
| President..... | HENRY B. WARD University of Illinois, Urbana, Ill. |
| Secretary..... | EDWARD ELLERY Union College, Schenectady, N. Y. |
| Treasurer..... | GEORGE B. PEGRAM Columbia University, New York City |

EXECUTIVE COMMITTEE

| | |
|--------------------------|--|
| LAUDER W. JONES..... | Princeton University, Princeton, N. J. <i>Term expires January, 1924</i> |
| CARL H. EIGENMANN..... | Indiana University, Bloomington, Ind. <i>Term expires January, 1925</i> |
| GEORGE W. STEWART..... | University of Iowa, Iowa City, Iowa <i>Term expires January, 1926</i> |
| CLARENCE E. MCCLUNG..... | University of Pennsylvania, Philadelphia, Pa. <i>Term expires January, 1927</i> |
| F. K. RICHTMYER..... | Cornell University, Ithaca, N. Y. <i>Term expires January, 1925</i> |

*Published by the Society of the Sigma Xi
at Easton, Pa.*

ANNUAL SUBSCRIPTION \$1.00

SINGLE NUMBER 25 CENTS

Changes of address should be communicated only to chapter secretaries.

Subscriptions and manuscripts should be sent to the general secretary, Edward Ellery, Union College, Schenectady, N. Y.

Entered as Second-class Matter, June 8, 1923, at the Post Office at Easton, Pa., under the Act of August 24, 1912. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized June 8, 1923.

SIGMA XI QUARTERLY

EDITORIAL COMMITTEE

FLOYD KARKER RICHTMYER
EDWIN EMERY SLOSSON

HENRY BALDWIN WARD
EDWARD ELLERY

VOL. XI

SEPTEMBER, 1923

No. 3

EDITORIALS

THE TWENTY-FOURTH CONVENTION

What the officers of Sigma Xi are thinking about just now in connection with the society is the convention that is to be held in Cincinnati December 28. It promises to be of unusual value and importance, not only to the organization but to the cause of scientific research. The committee of arrangements has planned the following program:

- 2:30 P.M. Business session
- 6:15 P.M. Annual dinner
- 8:45 P.M. Second annual joint meeting of the Association for the Advancement of Science and Sigma Xi;
Address: The Vacuum; There's Something in it. Dr. Willis Rodney Whitney, Director of the Research Laboratory of the General Electric Company.

At the business session the executive committee will present petitions for charters from groups in some well known institutions, there will be reports of the officers bearing on the policy of the society upon which the officers would like expression of judgment, and the recently elected alumni committee will be present for the first time to represent the vast body of science workers whom it is desired to bring into close touch with the active society.

The evening event is sure to arouse deep interest on the part of every one in attendance on the general meetings. Dr. Whitney is too well known in this country and Europe as an investigator to need an introduction to any scientific audience. He has accomplished great things himself and has inspired many workers not only in

physics and chemistry, but also in many other fields. We shall hear about the latest developments in the many applications of vacuum tubes from one who has firsthand knowledge, and we shall see brilliant and splendid illustrations by a past master at demonstration.

It is urged that chapters begin now to prepare for the convention by discussing at chapter meetings what they would like their delegates to find out about the ideals and policies of the national organization; what, if any, parts of the constitution they desire to be interpreted; and by appointing an enthusiastic and active member as delegate.

At the Boston Convention thirty-one out of the thirty-eight chapters were represented, the largest representation at a convention in the history of the society.

At the Cincinnati Convention the officers hope for one hundred per cent representation.

Will all chapter officers keep the convention before the chapters during the next two months?

* * *

THE SIGMA XI FELLOWSHIP

All Sigma Xi members are urged to read the account given in this issue of the award of the second Sigma Xi Fellowship, and of the researches that are to be carried out on this foundation. Dr. Moodie has already established a reputation as a research worker, the problem on which he is at present at work is an important one, and the society is glad to be in position to give its aid to an investigator of broad reputation.

AWARD OF THE SIGMA XI FELLOWSHIP FOR 1923-24

The Executive Committee is pleased to announce the award of a Sigma Xi Fellowship for 1923-24 by Dr. Roy L. Moodie, of the Department of Anatomy of the College of Medicine of the University of Illinois, to enable him to continue his researches in Paleopathology. Dr. Moodie's contributions to this field have already been very extensive, and aided by this fellowship he expects to spend a large part of the coming year examining various museum collections in southwestern United States. The following is a statement of the proposed work, as prepared for the committee by Dr. Moodie.

Proposed Researches in Paleopathology to be made during the period July 1st, 1923 to July 1st, 1924, under the auspices of the Sigma Xi, by Dr. Roy L. Moodie, Sigma Xi Fellow for 1923-24.

STATEMENT OF PROBLEM

GENERAL TOPIC: Studies in Paleopathology.

SPECIAL PHASE: Study of Pleistocene Pathology as represented by the collections of Rancho la Brea fossils at Los Angeles.

SPECIAL PHASE: Study of Pre-Columbian Pathology as represented in the collections of Indian remains at San Diego Museum. Special arrangements have already been made to study and describe these collections.

ACCESSORY STUDIES: The Environment of the Pre-Columbian Indians in Southern California, including a trip into the Colorado desert and in the mountains; the idea being to see if the environment of these primitive peoples can be regarded as of importance to their well being.

OTHER STUDIES: An enquiry into the mammalian life of the pre-Columbian Period. What were the domesticated animals of the pre-Columbian Indians of this area and what was their influence on the health of the people?

The permanent address will be 910 Superba Ave., Venice, California. From this point excursions will be made by motor, train and horseback to such places as Los Angeles, San Diego, Coachella Valley and the Colorado desert. Other points will undoubtedly arise as the work progresses. The greater part of fourteen months

will be consumed in these studies, and if not completed I plan to return again and again until the resources are exhausted.

DESIRABILITY OF THE WORK

Very little is definitely known of the status of disease during the pre-Columbian Period. This gives us an opportunity of studying the influence which the contact of white races has had on a primitive race, so far as disease is concerned. An especial search is to be made for evidences of pre-Columbian syphilis, concerning the origin of which there is much doubt.

METHOD OF STUDY

The technique outlined in my previous Studies in Paleopathology will be followed in this endeavor. Gross examination of specimens will be followed by special histological examination of interesting lesions. Important histological characters will be illustrated by photomicrographs. Radiographic study may be made of certain important lesions. In general the type of illustration and study will follow the plan outlined by G. Elliot Smith and F. Wood Jones in their report on the Nubian mummies, described in the Report of the Archeological Survey of Nubia.

PREVIOUS STUDIES

A considerable amount of time and study, during the past eight years, have been devoted to perfecting the technique of this branch of science, especially that relating to fossil, and usually thoroughly petrified, animal remains. The published results are given in the Bibliographic List, including three books devoted to the subject of Paleopathology.

A study of fossil histology has been prepared but is not yet published. I plan to devote some time during this summer to a revision and completion of this paper for publication. An examination of the entire subject of fossil histology was necessary before an interpretation of the pathological lesions could be made. This paper is illustrated by five text figures and twelve full-page plates.

In conjunction with these studies I shall carry on a study of the Extinct Amphibia on which group of animals I have a volume well under way. This study involves a reconsideration of the possible

influence of disease on the extinction of this group of animals and a study of the histology of the skeleton-phases definitely related to Paleopathology.

It seems probable that enough new material will be found to prepare an extensive memoir, or a large well-illustrated paper. The place of publication of the results must necessarily depend on the amount and quality of material.

BIBLIOGRAPHIC LIST OF THE WRITINGS OF ROY L. MOODIE ON
ENTOMOLOGY, PALEONTOLOGY AND PALEOPATHOLOGY,
1905-1923

1. A new *Milesia* from Arizona, with Notes on some Wyoming Syrphidae. *Entomological News*, pp. 138-143, 1905.
2. The Sacrum of the Lacertilia. *Biological Bulletin*, xiii, 84-93, 1 figure, July, 1907.
3. Dissorophus, a Correction. *Science*, N. S., xxvii, No. 679.
4. Reptilian Epiphyses. *American Journal of Anatomy*, vii, 443-467, 24 figs., 1908.
5. The Claspings Organs of Recent and Extinct Amphibia. *Biological Bulletin*, xiv, 249-259, 5 figs., 1908.
6. The Dawn of Quadrupeds in North America. *Popular Science Monthly*, lxxii, 558-566, 5 figs., 1908.
7. The Ancestry of the Caudate Amphibia. *American Naturalist*, xlii, 361-373, 7 figs., 1908.
8. Osborn's Evolution of the Mammalian Molar Teeth (Review). *Anatomical Record*, ii, No. 5, 221-224.
9. The Lateral Line System in Extinct Amphibia. *Journal of Morphology*, xix, 511-540, 17 figs., 1908.
10. The Relationship of the Turtles and Plesiosaurs. *Kansas University Science Bulletin*, iv, 319-327, 2 figs., 1908.
11. The Chub and the Texas Horn Fly. *American Naturalist*, xliii, 186-188, 1 fig., 1909.
12. Contributions to a Monograph of the Extinct Amphibia of North America: New Forms from the Carboniferous. *Journal of Geology*, xvii, 38-92, 24 figs., 1909. (Doctor's Thesis, the completed monograph was published in 1916.)
13. Carboniferous Air-Breathing Vertebrates in the U. S. National Museum. *Proc. U. S. National Museum*, xxxvii, 11-28, pls. 4-10, 1909.
14. New or Little-known Forms of Carboniferous Amphibia in the American Museum of Natural History. *Bulletin American Museum Natural History*, xxvi, 347-357, pls. 58-65, 1909.
15. The Morphology of the Vertebrate Sacral Rib. *Anatomischer Anzeiger*, xxxiv, 361-364, 1909.
16. The Microsauria Ancestors of the Reptilia. *Geological Magazine*, May, 1909, 216-220, 1 fig.

17. The Alimentary Canal of a Carboniferous Salamander. *American Naturalist*, xlv, 367-375, 4 figs., 1910.
18. The Amphibia of the Mazon Creek, Illinois, Shales. *Science*, N. S., xxxi, 233-234, 1910.
19. An Armored Dinosaur from the Cretaceous of Wyoming. *Kansas University Science Bulletin*, v, No. 14, 257-273, pls. 55-69, 1911.
20. The Temnospondylous Amphibia, and a New Species of Eryops from the Permian of Oklahoma. *Kansas University Science Bulletin*, v, 235-253, pls. 49-55, 1911.
21. Contributions to the Soft Anatomy of Cretaceous Fishes and a New Herring-like Fish from the Cretaceous of Texas. *Kansas University Science Bulletin*, v, 277-287, pls. 60-62, 1911.
22. Two Amphibians, One of Them New, from the Carboniferous of Illinois. *Proceedings of the U. S. National Museum*, xl, 429-433, 2 figs., 1911.
23. An Embryonic Plesiosaurian Propodial. *Transactions of the Kansas Academy of Science*, 95-101, 7 figs., 1911.
24. A New Labyrinthodont from Kansas. *Science*, N. S., xxxii, 721, 1911.
25. A New Labyrinthodont from the Kansas Coal Measures. *Proceedings of the U. S. National Museum*, xxxix, 480-495, 4 figs., 1911.
26. The Stomach Stones of Reptiles. *Science*, N. S., xxxv, 377-378, 1912.
27. The Mazon Creek, Illinois, Shales and their Amphibian Fauna. *American Journal of Science*, xxxiv, 277-285, 4 figs., 1912.
28. The Pennsylvania Amphibia of the Mazon Creek, Illinois, Shales. *Kansas University Science Bulletin*, VI, No. 2, 323-357, 14 plates, 1912.
29. An American Jurassic Frog. *American Journal of Science*, xxxiv, 286-288, 1912.
30. The Skull Structure of *Diplocaulus magnicornis* Cope, and the Amphibian Order, *Diplocaulia*. *Journal of Morphology*, xxxii, 431-439, 2 pls., 1912.
31. Vertebrate Footprints from the Lower Permian of Kansas. *American Journal of Science*, xxxv, 31-33, 1 fig., 1913.
32. A New Plesiosaurian Genus from the Cretaceous of Kansas (With S. W. Williston). *Bull. Amer. Geol. Soc.*, xxiv, No. 1, 120-121, 1913.
33. Some Recent Advances in Vertebrate Paleontology. *American Naturalist*, xlvii, 183-192 and 248-256, 1913.
34. A List of the Described Species of Fossil Amphibia. *Kansas University Science Bulletin*, ix, 13-28, 1914.
35. The Fossil Frogs of North America. *American Journal of Science*, xxviii, 531-536, 2 figs., 1914.
36. A Coal Measures Amphibian with an Osseous Tarsus. *American Journal of Science*, xxxix, 500-512, 2 figs., 1915.
37. The Migrations and Geographical Distribution of the Fossil Amphibia. *American Journal of Science*, xxxix, 509-512, 1 map, 1 fig., 1915.
38. A Sphenoidal Sinus in the Dinosaurs. *Science*, N. S., xli, No. 1051, 288-289.
39. The Scaled Amphibia of the Coal Measures. *Science*, N. S., xli, 463-464, 1915.
40. Some Recent Studies on Fossil Amphibia. *American Naturalist*, xlix, 369-376, 1915.

41. On the Occurrence of a 9-Millimeter Human Embryo in the Margin of a Full-Term Placenta. *Surgery, Gynecology and Obstetrics*, May, 1915, 561-570, 9 figs.
42. A New Fish Brain from the Coal Measures of Kansas, with a Review of Other Fossil Brains. *Journal of Comparative Neurology*, xxv, No. 2, pp. 135-181, 19 figures and an extensive annotated bibliography. 1915.
43. A Further Contribution to a Knowledge of the Lateral Line System in Extinct Amphibia. *Journal of Comparative Neurology*, xxv, No. 4, 317-328, 7 figs., 1915.
44. The Coal Measures Amphibia and the Crossopterygia. *American Naturalist*, xlix, 637-644, 1915.
45. A Remarkable Microsaur from the Coal Measures of Ohio. *Science, N. S.*, xli, No. 1044, 84-85, 1915.
46. (Book) The Coal Measures Amphibia of North America. Publication No. 238, Carnegie Institution of Washington, October, 1916. Quarto, pp. 1-20, pls. 1-26, figs. 1-43, with bibliography on fossil Amphibia of 700 titles.
47. Some Methods of Studying Fossil Amphibia. *Kansas University Science Bulletin*, ix, 187-193, 1 pl., 1916.
48. On the Sinus Paranasales in Two Early Tertiary Mammals. *Journal of Morphology*, xxviii, 135-144, 5 figs., 1916.
49. The Growth of None in Cretaceous Times. *Science, N. S.*, xliii, No. 1097, 35-36, 1916.
50. Mesozoic Pathology and Bacteriology. *Science, N. S.*, xliii, No. 1108, 425-426, 1916.
51. Bacteriologic and Pathologic Evidences in Past Geologic Ages. *Transactions of the Chicago Pathological Society*, October 1916, 84-88.
52. On the Structure and Growth of the Plesiosaurian Propodial. *Journal of Morphology*, xxvii, 401-410, 6 figs., 1916.
53. Two Caudal Vertebrae of a Sauropodous Dinosaur Exhibiting a Pathological Lesion. *American Journal of Science*, xli, 530-531, June, 1916.
54. The Influence of Disease in the Extinction of Races. *Science, N. S.*, xlv, No. 1151, 63-64, 1917.
55. The Sources of Anatomical Literature. *American Naturalist*, li, 193-208, April, 1917.
56. Biographical Sketches of 800 Anatomists, pp. 177-354 of "Anatomical Names," by A. C. Eycleshymer, 1917.
57. A New Plesiosaur from the Cretaceous of Kansas. (With S. W. Williston.) *Kansas University Science Bulletin*, x, No. 5, 61-72, 3 figs., 5 pls., 1917.
58. Pathologic Lesions Among Extinct Animals: A Study of the Evidences of Disease Millions of Years Ago. *Surgical Clinics of Chicago*, April, 1918, ii, No. 2, 319-331, figs. 108-116.
59. Armand Thevenin. *Science, N. S.*, xlviii, No. 1230, 84, July, 1918.
60. Paleontological Evidences of the Antiquity of Disease. *Scientific Monthly*, vii, No. 3, pp. 265-281, 21 figs., 1918.
61. Studies in Paleopathology: I. General Consideration of the Evidences of Pathological Conditions Found Among Fossil Animals. *Annals of Medical History*, I, No. 4, 374-393, 20 figs., 1918.

62. The Tubercle of Carabelli and Congenital Syphilis. *Annals of Medical History*, I, No. 4, 423-424, 1918.
63. Studies in Paleopathology: II. Pathologic Evidences of Disease Among Ancient Races of Man and Extinct Animals. *Surgery, Gynecology and Obstetrics*, 498-510, 45 figs., 1918.
64. Synthesis of Paleontology and Medical History. *Science*, N. S., xlviii, No. 1251, 619-620, Dec., 1918.
65. Studies in Paleopathology: III. Opisthotonos and Allied Phenomena Among Fossil Vertebrates. *American Naturalist*, lii, 384-394, 8 figs., 1918.
66. On the Parasitism of Carboniferous Crinoids. *Journal of Parasitology*, iv, No. 174-176, June, 1918.
67. Diseases of the Mosasaurs. *Bulletin of the Geological Society of America*, xxix, 147, 1918.
68. Paleopathology. *Southern Medical Journal*, xii, 182-184, 1919.
69. Renaissance Anatomy. *Science*, N. S., xlix, 472-474, 1919.
70. Ancient Skull Lesions and the Practice of Trephining in Prehistoric Times. *Surgical Clinics of Chicago*, iii, 481-496, 10 figs., June, 1919.
71. Opisthotonos. *Science*, N. S., 50, 275-276, 1919.
72. Thread Mould and Bacteria in the Devonian. *Science*, N. S., 51, 14-15, 1920.
73. New Observations in Paleopathology. *Annals of Medical History*, II, 241-247, 1920.
74. Studies in Paleopathology. IV. The Diseases of the Ancient Peruvians and Some Account of Their Surgical Practices. *Surgical Clinics of Chicago*, iv, 211-231, figs. 72-83, February, 1920.
75. The Nature of the Primitive Haversian System. *Anatomical Record*, xix, 47-50, 1 pl., 1920.
76. Studies in Paleopathology. V. Primitive Surgery in Ancient Egypt. *Surgical Clinics of Chicago*, iv, 349-358, figs. 121-128, 1920.
77. The Elements of the Haversian System in Normal and Pathological Structures Among Fossil Vertebrates. Unpublished (56 typewritten pages, 10 figs., and 12 plates).
78. Studies in Paleopathology. VI. The Antiquity of Pott's Disease and Other Spinal Lesions: Primitive Treatment. *Surgical Clinics of Chicago*, iv, 619-627, figs. 200-207, June, 1920.
79. Studies in Paleopathology. VII. The Use of the Cautery Among Neolithic and Later Primitive Peoples. *Surgical Clinics of Chicago*, iv, 851-862, figs. 289-291, August, 1920.
80. Studies in Paleopathology. VIII. Surgery and Disease Among the Pre-Columbian Indians of North America. *Surgical Clinics of Chicago*, iv, No. 5, 1091-1102, figs. 13, October, 1920.
81. Studies in Paleopathology. IX. A Variant of the Sincipital T from Peru. *American Journal of Physical Anthropology*, iv, 219-222, 2 plates, June, 1921.
82. Concerning the Fossilization of Blood Corpuscles. *American Naturalist*, liv, 460-64, 1 fig., 1920.
83. Studies in Paleopathology. X. The Amputation of Fingers by Neolithic and Modern Primitive Races, and Other Voluntary Mutilations Indicating

- Some Knowledge of Surgery. *Surgery Clinics of Chicago*, iv, 1299-1306, 4 figs., Dec., 1920.
84. Ancient Bacteria and the Beginnings of Disease. *Scientific Monthly*, 362-364, Oct. 1920.
85. Evolution's Most Romantic Moment. *Scientific Monthly*, 464-469, Nov., 1920.
86. Stone Age Man's Cure for Headache. *Scientific Monthly*, February, 1921.
87. The Works of Ameghino (A Review). *Science, N. S.*, lii, 469, Nov., 1920.
88. Microscopic Examination of a Fossil Fish Brain. *Journal of Comparative Neurology*, xxxii, 2 figs., Dec., 1920.
89. Studies in Paleopathology. XI. The Status of our Knowledge of Mesozoic Pathology. *Bull. Geol. Soc. Amer.*, xxxii, 321-326, 1921.
90. (Book) Studies in the Paleopathology of Egypt, by Sir Marc Armand Ruffer, edited by Roy L. Moodie, issued from the University of Chicago Press, October 15, 1921, pp. i-xx, and 1-372, with full page plates I-LXXI.
91. Bacteria in the American Permian. *Science, N. S.*, liv, 194, Sept., 1921.
92. The Influence of the Lateral Line System on the Peripheral Osseous Elements of Fishes and Amphibia. *Journal of Comparative Neurology*, 34, 319-334, 5 figs., 1921.
93. Osteomyelitis in the Permian. *Science, N. S.*, liii, 333, April, 1921.
94. Disease of Fossil Men and the Beginnings of Surgery. *Scientific Monthly*, xiv, 391-94, April, 1922.
95. On the Endocranial Anatomy of Certain Oligocene and Pleistocene Mammals. *Journal of Comparative Neurology*, xxxiv, 25 figs., 343-379, Aug., 1922.
96. (Book) The Antiquity of Disease. *The University of Chicago Press*, small 8 vo., pp. 1-150, 38 figs.
97. Antinomycosis in a Fossil Rhinoceros. *Journal of Parasitology*, ix, Sept., 1922.
98. The Paleopathology of the Parasuchians. *Science, N. S.*, lvi, 417, Oct., 1922.
99. The Paleopathology of the Fossil Invertebrates. *Science, N. S.*, lvii, 85, Jan., 1923.
100. An Unusual Form of Pliocene Pathology. *American Journal of Science*, v, 334-336, 1 fig., April, 1923.
101. (Book) Paleopathology: An Introduction to the Study of Ancient Evidence of Disease, pp. 1-567, figs. 1-49 and Plates 1-117. Royal Octavo. Published under the auspices of the Graduate School of the University of Illinois, 1923.

THE OREGON CHAPTER

The installation of the Oregon Chapter of the Society of Sigma Xi occurred in the Woman's Building of the University of Oregon on Friday afternoon, June 22, 1923. The installing officers were the National President, Professor Henry B. Ward, and the National Secretary, Dean Edward Ellery.

President Ward presided at the meeting and after a few introductory remarks called for the reading of the petition and the records of action by the Executive Committee and the National Convention. Then followed the presentation of the certificates of membership to the petitioners who were already members of the Society after which the petitioners who were not members were ushered in and presented with their certificates of membership. The charter of the Oregon Chapter was then presented by President Ward to Professor A. E. Caswell, Chairman of the Sigma Xi Committee of the University of Oregon Science Club, after which formal announcement of the establishment of the Chapter at the University of Oregon was made.

Secretary Ellery was then called upon to deliver to the new chapter the charge from the National Organization. In this charge was set forth the aims and ideals of Sigma Xi and particularly was it stressed that Sigma Xi stands primarily for the promotion of research. These remarks brought up a number of questions which were later taken up in a symposium led by the National Officers but entered into by the members of the new chapter. These had to do mainly with the methods and policies of the organization, especially those in regard to the election of members from both the faculty and student body.

Following the symposium President Ward acted as chairman during the organization of the new chapter, which was accomplished by the presentation and adoption of the By-Laws and the nomination and election of the following officers:

| | |
|--------------------|-----------------------|
| President, | Dr. A. E. Caswell |
| Vice-president, | Dr. G. E. Burget |
| Secretary, | Dr. H. B. Yocom |
| Treasurer, | Dr. H. R. Crosland |
| Board of Electors, | |
| For one year, | Dr. Harry Beal Torrey |
| | Dr. E. S. Conklin |
| For two years, | Dr. O. F. Stafford |
| | Dr. E. L. Packard. |

The meeting was then turned over to the new officers and congratulations were received from delegates and visitors of other institutions.

A noticeable feature of the exercises was the large attendance of members from other institutions. Professors R. M. Winger and John Weinzirl came as official representatives from the University of Washington Chapter while several members of the Faculty of the Oregon Agricultural College who were members at other institutions, and Professor Knowlton of Reed College were present although not as official representatives.

In the evening an installation banquet was held at the Anchorage Tea House at which short addresses were made by Professor A. E. Caswell, President P. L. Campbell, Dean Colin V. Dymont, Professor John Weinzirl, Professor Knowlton, Professor Nathan Fasten, Professor Roy M. Winger. Greetings were extended to the new organization from the National Organization by National Secretary Edward Ellery while the principal address of the evening was given by the National President Henry B. Ward.

The following are the names of the charter members of the Oregon Chapter of the Sigma Xi:

| | |
|--------------------------|---------------------------|
| William Fitch Allen | Edward Hiram McAllister |
| Robert Louis Benson | William Edmund Milne |
| John Freeman Bovard | Harold Bunce Myers |
| William Pingry Boynton | Earl Leroy Packard |
| George Emmanuel Burget | John Jacob Putnam |
| Albert Edward Caswell | Harry Johnson Seas |
| Edmund Smith Conklin | Frederick Lafayette Shinn |
| Harold Randolph Crosland | Warren DuPre Smith |
| Anne Hardy | Orin Fletcher Stafford |
| Howard Davis Haskins | Herbert Giles Tanner |
| Edwin Thomas Hodge | Harry Beal Torrey |
| Samuel Calvin Kohs | Harry Barclay Yocom |
| Olof Larsell | Raymond Holder Wheeler |

Roger John Williams

Submitted by H. B. Yocom, *Secretary*.

CHAPTER REPORTS

NORTH DAKOTA

Annual report of University of North Dakota Chapter of Sigma Xi for the year 1922-23.

Officers elected:

President, A. D. Bush, resigned and K. H. Fussler succeeded him as per by-laws.

V. Pres., K. H. Fussler elected but on resignation of Dr. Bush became president.

Secretary-Treasurer, L. P. Dove.

MEETINGS, TOPICS AND LECTURERS

"The Morphology of The Vein-Islet in Foliage Leaves," Miss Sara Lewis, of the Department of Botany.

"The Progress of Testing North Dakota Lignite," Dean E. J. Babcock of the School of Mines.

"Impressions of Madison, Wisconsin," Doctor Norma E. Pfeiffer of the Department of Botany.

"Parathyroid Hypo-function," Mr. A. W. Bell of the School of Medicine.

"Sensitivity of the Peripheral Retina," Mr. Raymond McCradie of the School of Medicine.

"The Spiritual Evolution of Man," Dean Edward Ellery, Union College, Schenectady, N. Y. Joint meeting with Phi Beta Kappa.

MEMBERS ELECTED

Doctor George A. Abbott, Research on poisons, paints and oils and recent perfection of an improved colorimeter.

ASSOCIATES ELECTED AND FIELD OF WORK

Alice May Austin, Psychology,
George E. Bond, Chemistry,
William E. Budge, Industrial Chemistry,
Cecil W. Byers, Physics,
Ellis O. Erickson, Electrical Engineering,
J. Ralph Finkle, Biology,

Chas. E. Kerchner, Mechanical Engineering.

John D. Leith, Mathematics,

Dwight B. Mapes, Chemistry of Oils,

Julia Rue, Geography and Geology,

John W. Schauer, Biology,

McDonald Scott, Industrial Chemistry,

Helen Stegenga, Biology,

Henry J. Witteveen, Industrial Chemistry.

L. P. Dove, *Secretary*.

AMES

OFFICERS ELECTED

President,

Dr. L. H. Pammel

Vice-President,

Dr. O. R. Sweeney

Secretary,

Dr. P. E. Brown

Treasurer,

Dr. J. A. Wilkinson.

MEETINGS

February 26—"The Atomic Structure and the Periodical System of Elements," Professor A. Sommerfeld, Director of the Institute of Mathematical Physics, Munich.

May 14—"The Ammonia System of Acids, Bases and Salts," Professor E. C. Franklin, Prof. of Organic Chemistry, Stamford University.

MEMBERS ELECTED

FACULTY

William James Diederichs, Assistant Professor of Mechanical Engineering,

Ada Hayden, Assistant Professor of Botany,

Anna E. Richardson, Dean of Home Economics Division,

Luther Sherman Ross, Prof. of Zoology at Drake University.

GRADUATES (RESIDENT)

Ernest Victor Abbott, Fellow in Soils,

George Wilbur Burke, Chemical Engineering,

Erastus Waldon Dunnam, Fellow in Zoology and Entomology
Department,
Michael Grimes, Fellow in Dairy Bacteriology,
Harold Lee Maxwell, Chemistry,
Oscar Wallace Park, Entomology and Zoology,
R. Howard Porter, Plant Pathology,
Ernest Brooke Stanley, Chemistry,
Bertram Stanley Sweeting,
Silvere Cyril Vandecareye, Fellow in Soils.

MICHIGAN

OFFICERS ELECTED

| | |
|-----------------|------------------------------|
| President, | A. S. Warthin (Pathology), |
| Vice-President, | E. M. Bragg (Marine Engin.), |
| Secretary, | J. H. Ehlers (Botany), |
| Treasurer, | W. C. Rufus (Astronomy), |

MEETINGS, TOPICS AND LECTURERS

Three joint meetings with the Junior Research Club were held as follows:

1. Nov. 24, 1922. Pres. John C. Merriam of the Carnegie Institution of Washington spoke on the subject "Have the Days of Creation Ended?"
2. March 6, 1923. Prof. R. H. Curtiss of the Astronomy staff spoke on the topic "Stellar Evolution."
3. May 3, 1923. Prof. E. F. Barker of the Physics staff spoke on the topic "Atomic Structure."

Several business meetings for the revision of the by-laws of the local chapter after the revision of the national Constitution were held, and the fall initiation was held Dec. 4, 1922, and the spring initiation May 25, 1923. At the latter, following the usual banquet and initiation ceremonies, the retiring president, Prof. A. F. Shull of the Zoology staff, spoke on the subject "The University of Michigan in 1923."

FULL MEMBERSHIP

FACULTY

John Lyons Chalmers, Prof. of Oral Surgery and Consulting Surgeon to Univ. Hospital.

Harold Graves Waller, Research Assistant in Internal Medicine,
Univ. of Michigan Medical School.

ALUMNI MEMBER

Ferris Nicholas Smith, Surgeon.

GRADUATE STUDENTS

Leigh Charles Anderson, Teaching Assistant in Chemistry, Univ.
of Michigan.

Dow Vawter Baxter, Forest Pathology.

Charles Wildman Clarke, Physical Chemistry.

William LaVilla Fink, Physical Chemistry and Metallurgy.

Glenn C. Forrester, Organic Chemistry (Carbon).

Wendell Horace Griffith, Biochemistry.

Mark Lorin Ireland, Major Quartermaster Corps, U. S. Army;
Highway-Tractive Resistance of Roads.

Hazel Marie Losh, Astrophysics.

Dean Benjamin McLaughlin, Astrophysics.

Elroy John Miller, Agricultural Chemistry.

Ray Nelson, Plant Pathology.

Harold Judson Osterhof, Colloidal Chemistry.

Lawrence August Philipp, Physical Chemistry.

Harold Rich Roehm, Bacteriology.

Malcolm Herman Soule, Gas Relations in Bacterial Cultures.

Donalee Levi Tabern, Organic Chemistry.

Helen Updegraff, Saliva-Blood Relationships.

Maurice Van Loo, Colloidal Chemistry.

Lewis Edgar Wehmeyer, Mycology.

Roy Russell Wilson, Physical Chemistry.

ASSOCIATE MEMBERS

Werner Emmanuel Bachmann, Organic Chemistry.

Bruce Arthur Butcher, Mechanical Engineering.

William A. Cotton, Jr., Electrical Engineering.

Frank Egbert Eggleton, Zoology (Graduate Student).

Eileen Whitehead Erlanson, graduate student in Botany.

Harthur Lewis Keim, graduate student in Dermatology.

Howard Frederick Kingdon, Electrical Engineering.

Aaron Levin, Electrical Engineering.
 Charles Mason Mower, Jr., Civil Engineering.
 Lowell Kendall Mower, Civil Engineering.
 Joseph Allyn Packard, Mechanical Engineering.
 John C. Pernert, graduate student in Organic Chemistry.
 Paul Brown Pew, Mechanical Engineering.
 William John Piper, Electrical Engineering.
 Irving Jesse Sandorf, Electrical Engineering.
 Dean Campbell Seitz, Mechanical Engineering.
 Edwin Frost Smellie, Mechanical Engineering.
 Edward Ralph Wolfert, Electrical Engineering.
 Margaret Newell Woodwell, Internal Medicine.

LIST

CH

Cornell
 Rensselaer
 Union
 Kansas
 Yale
 Minne
 Nebras
 Ohio
 Pennsy
 Brown
 Iowa
 Stanfo
 Califor
 Colum
 Chicag
 Michig
 Illinois
 Case
 Indian
 Missou
 Colora
 North
 Syracu
 Wiscon
 Univer
 Was
 Worces

Purdue

Washin
 Univ
 Distric
 Colu

Texas.

Mayo
 dation
 N. Caro
 N. Dak
 Ames
 Rutgers

McGill
 Kentuc

Idaho
 Swarth
 Oregon

Oklahor
 Arizona
 Souther
 Duluth

List

CHAPTER OFFICERS

LIST FURNISHED BY THE CORRESPONDING SECRETARIES OF THE CHAPTERS

| CHAPTER | PRESIDENT | VICE-PRES. | SECRETARY | TREASURER |
|-----------------------------|------------------------|----------------------------|-------------------------|------------------------|
| Cornell..... | H. P. Weld.... | R. A. Emerson. | A. H. Wright.. | O. A. Johannsen. |
| Rensselaer.... | W. W. Rousseau | ..... | E. M. Clark.... | W. J. Williams |
| Union..... | J. N. Vedder... | J. H. Stoller.... | M. F. Sayre.... | M. F. Sayre |
| Kansas..... | F. B. Dains.... | W. S. Hunter... | G. W. Smith.... | H. E. Jordan |
| Yale..... | S. J. Record.... | A. M. Bateman.. | P. J. Laurson.. | H. W. Rhinehart |
| Minnesota.... | J. T. Tate..... | T. S. Palmer.... | A. T. Rasmussen | F. B. Kingsbury |
| Nebraska..... | H. G. Deming.. | W. L. DeBaufre.. | E. N. Anderson. | M. G. Gaba |
| Ohio..... | J. R. Withrow.. | C. A. Norman.... | Edward Mack.. | T. G. Phillips |
| Pennsylvania.. | W. C. Farabee.. | H. C. Berry.... | W. Steckbeck.. | H. S. Colton |
| Brown..... | R. F. Chambers | ..... | R. F. Borden... | H. F. Davison |
| Iowa..... | L. C. Raiford... | A. O. Thomas.... | Perry A. Bond.. | F. A. Nagler |
| Stanford..... | E. G. Martin.... | W. A. Manning.. | C. N. Cross.... | C. N. Cross |
| California.... | A. S. Eakle.... | W. C. Bray.... | R. T. Birge.... | A. C. Alvarez |
| Columbia.... | W. L. Slichter.. | W. B. Fite.... | S. L. Quimby... | S. L. Quimby |
| Chicago..... | H. C. Cowles... | H. H. Barrows.. | E. R. Long.... | E. R. Long |
| Michigan..... | A. S. Warthin.. | E. M. Bragg.... | J. H. Ehlers.... | W. C. Rufus |
| Illinois..... | C. S. Crandall.. | T. E. Savage.... | J. H. Reedy.... | F. B. Seely |
| Case..... | R. H. Danforth. | J. J. Nassau.... | K. W. Rausch.. | T. M. Focke |
| Indiana..... | J. B. Dutcher.. | C. A. Malott.... | Flora Anderson. | Paul Harmon |
| Missouri..... | W. J. Robbins.. | A. C. Lanier.... | W. A. Albrecht. | A. Gulick |
| Colorado..... | Ivan E. Wallin | I. C. Crawford.. | Charles F. Poe.. | F. S. Bauer |
| Northwestern | H. S. Philbrick | E. J. Moulton.. | B. J. Spence.... | Margaret Fuller |
| Syracuse..... | H. F. A. Maier | R. K. Brewer.... | V. Obreshkove.. | O. Gelormini |
| Wisconsin.... | A. S. Pearse.... | E. M. Terry.... | E. Truog..... | R. H. Dennison |
| University of Washington | J. C. Rathbun... | R. M. Winger... | E. J. Saunders.. | E. A. Loew |
| Worcester.... | A. J. Knight.... | S. J. Plimpton.. | C. D. Knight.... | G. H. MacCul- lough |
| Purdue..... | R. A. Craig.... | G. C. Branden- burg | A. P. Poorman.. | C. M. Smith |
| Washington University.. | W. H. Koever... | F. B. Hanson... | P. R. Rider.... | L. Pyle |
| District of Columbia.... | E. E. Slosson... | M. C. Hall.... | Charles Brooks | Lorenz Whitte- more |
| Texas..... | W. A. Felsing.. | R. L. Moore.... | H. J. Muller... | P. A. Batchel- der |
| Mayo Foun- dation..... | W. C. Kendall.. | W. C. McCarty | T. B. Magath... | T. B. Magath |
| N. Carolina.. | W. B. MacNider | J. W. Lasley... | T. Saville.... | T. Saville |
| N. Dakota.... | K. H. Fussler.. | ..... | L. P. Dove.... | L. P. Dove |
| Ames..... | L. H. Pammel.. | O. R. Sweeney.. | P. E. Brown.... | J. A. Wilkinson |
| Rutgers..... | George Win- chester | A. W. Blair.... | P. A. van der Meulen | G. W. Martin |
| McGill..... | W. W. Chipman | A. S. Eve.... | R. DeL. French. | R. DeL. French |
| Kentucky.... | W. D. Funk- houser | Marietta Eich- elberger | H. H. Downing | P. E. Karraker |
| Idaho..... | M. F. Angell.. | F. G. Miller.... | Eugene Taylor | C. E. Behre |
| Swarthmore.. | J. A. Miller.... | Spencer Trotter | W. R. Wright.. | E. W. Doebler |
| Oregon..... | A. E. Caswell.. | G. E. Burget... | H. B. Yocom.... | H. R. Crosland |

Sigma Xi Clubs

| | | | | |
|----------------|-------------------|-------|------------------|----------------|
| Oklahoma.... | D. A. Richards.. | ..... | J. B. Umpleby.. | J. B. Umpleby |
| Arizona..... | ..... | ..... | H. B. Leonard.. | ..... |
| Southern Cal.. | W. L. Hardin.. | ..... | P. W. Merrill... | E. E. Chandler |
| Duluth..... | C. E. Goldthwaite | ..... | E. W. Kelly.... | ..... |

List corrected up to September 1, 1923.

OFFICIAL ANNOUNCEMENTS

Associate membership emblems can be secured only by order from the chapter secretary to the national secretary. All orders must be prepaid. Special order blanks sent on request.

QUARTER CENTURY RECORD AND HISTORY bound in electric blue cloth. 1886-1911. 7500 names. 550 pp. \$2.50.

SIGMA XI PUBLICATIONS

QUARTERLY, Volumes 1-7, 1913-19, four numbers each, unbound, 50 cents per each volume. Forwarded prepaid on receipt of draft or money order in payment of the amount indicated.

Title-Page and Table of Contents of any volume on request.

Those ordering a complete set of the QUARTERLY and HISTORY will receive in addition until the supply is exhausted without extra cost a copy of each of the Proceedings of the early Conventions as follows:

Seventh (Philadelphia) Convention. 1904. Pamphlet. 15 pp.

Eighth (New York) Convention. 1906. Pamphlet. 7 pp.

Ninth (Chicago) Convention. 1908. Pamphlet. 14 pp.

Tenth (Baltimore) Convention. 1909. Pamphlet. 6 pp.

Eleventh (Boston) Convention. 1909. Pamphlet. 16 pp.

Twelfth (Minneapolis) Convention. 1910. Pamphlet. 27 pp.

Thirteenth (Washington) Convention. 1911. Pamphlet. 27 pp.

Later conventions are reported in the QUARTERLY.

PRINTED BLANKS

The General Convention has instructed the Secretary to forward to chapters under the following stipulations:

Membership Certificates, stamped with the great seal of the Society. In packages of fifty prepaid, on advance payment of \$2.50 for each package. Please specify carefully whether for members or associates.

Index Cards, provided a duplicate set be sent for the general index of the Society maintained in the secretary's office. Gratis.

MAILING LISTS FOR THE QUARTERLY

Chapter secretaries are requested to furnish a correct list of mailing addresses of active members for the printer. Blank forms, gratis on demand.

The mailing list should be sent early in September and be valid for the academic year. All changes of address and all other correspondence should be addressed to the Secretary of Sigma Xi, Edward Ellery, Union College, Schenectady, N. Y.